

*Claims:*

- 1           1.       An analog to digital converter (DAC) comprising:  
2           a first circuit configured to remove even harmonic errors from an output signal,  
3       the first circuit having a first DAC module configured with a first threshold input for  
4       receiving a first threshold value and a second threshold input for receiving a second  
5       threshold value, where the two threshold inputs define a threshold range that varies  
6       between a low voltage threshold and a high voltage threshold, and a switching circuit  
7       configured to reverse the threshold values between the first and second threshold inputs;  
8           a second circuit configured to remove odd harmonics from an output signal, the  
9       second circuit having a second DAC module configured with a third threshold input for  
10       receiving a third threshold value and a fourth threshold input for receiving a fourth  
11       threshold value, where the third and fourth threshold inputs define a threshold range that  
12       varies between a low voltage threshold and a high voltage threshold, and a switching  
13       circuit configured to reverse the threshold values between the first and second threshold  
14       inputs; and  
15           a differential amplifier configured to receive an output from the first circuit and  
16       an inverted output from the second circuit, and configured to transmit an output signal.